

REVIEW

Not yet at the table: The absence of food culture and tradition in agroecology literature

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This review of agroecology's current work on culture and food traditions—a principle of the field and one of the FAO's 10 Elements of Agroecology—reveals two things. First, although culture and tradition are frequently mentioned in passing, there is little published literature detailing how they intersect with agroecology. Second, mentions of tradition and culture in this corpus reveal scholarly assumptions that practicing agroecology or food sovereignty will naturally result in unspecified healthy, diversified, community-driven food choices. But consumption practices shape production practices at least as much as the reverse. Food cultures are complex, shifting, and geographically and historically informed, and must be considered within their rich contexts. Agroecology needs to critically engage with the kitchen and the table in order to achieve the holistic and multi-faceted agricultural transformations imagined by the FAO and others.

Keywords: Food culture; Food traditions; Agroecology; Food sovereignty; Sustainable transitions

Introduction: Cultural and food traditions in agroecology literature and development work

The Food and Agriculture Organization (FAO) has integrated the field of agroecology into its approach to meeting the United Nation's Sustainable Development Goals (SDGs), to be achieved by 2030; integrating a field understood to be a science, practice and a movement (Wezel et al., 2009) adds gravitas to these lofty aspirations.¹ At the broadest level, the FAO's goals for agroecology are to end poverty and hunger around the globe while also mitigating climate change. There is a growing consensus that input-intensive agricultural practices interfere with any possible solution for these 'wicked problems' of our times (Shiva, 2016; Wise, 2019). The 10 Elements of Agroecology reflect an ambition to create a truly holistic approach to agroecosystems and help set the research priorities, funding opportunities, and policy implications for agroecological work. They suggest that dreams of development based primarily on industrial methods, technological innovations, and dominant (primarily Western) paradigms of knowledge are being replaced with ideals emerging from on-the-ground realities. They also signal to non-agroecologists what the field offers in managing sustainable

and culturally-embedded food systems. In this paper, we review the current work on one of these Elements – culture and food traditions – and argue that within agroecology there remains a need for conceptualizing traditional foods in their full, modern complexity. We demonstrate this need by drawing on existing food studies disciplines and contrasting them with scholarly assumptions.

In its explanation of the Culture and Food Traditions Element, the FAO argues that the disconnect between current food habits and traditional food cultures is driving many problems related to malnutrition and diet-related disease; the cure is to rebalance modern and traditional food habits (FAO, 2019a). This Element asserts that by supporting “*healthy, diversified and culturally appropriate diets*,” agroecology can deliver good nutrition while assuring the health of ecosystems (FAO, 2018). In putting forward this Element, the FAO formulates a crucial argument about cause and effect across the domains of food production and consumption: without healthy systems for growing food there can be no such means for eating such food. This may seem like common sense, but in the context of industry-influenced, production-focused worldwide development work, it is an innovative argument. In the division of labor (both in scholarly research and development efforts), these domains have remained distinct. Thus, in order to fully realize this Element, there needs to be an explicit consideration of an array of scholarly work to understand what constitutes “*healthy, diversified and culturally appropriate*.”

Agroecology, at least as represented by the FAO, is trying to accomplish many significant goals. Increased food production, food security, nutrition, healthy ecosystem

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services, biodiversity, and climate change resilience, to name just some of the goals listed on their website (FAO, 2019c). This is purportedly one of the main strengths of agroecology: that it can address social and environmental problems simultaneously. In the FAO's words, cultural identity and practices are critical for creating healthier food systems. There is a synergy between place, culture, crops, and diets. Historically, the activities of agrarian smallholders integrated their production and consumption practices – crops were grown to be used as ingredients in dishes eaten at meals.

However, relying on agroecology's premises (especially low-input, diversified farming) as an uncomplicated pivot between healthy, diversified, and culturally appropriate diets and healthy ecosystems is a challenging association. The challenges are conceptual and practical. Although the majority of the globe's rural residents remain involved in small scale food production, that work does not always translate into everyday food habits that can be characterized as healthy, diversified, or culturally appropriate. This is often due to the global shift to commodity forms of food production and widespread consumption of processed and highly-processed food (identified as the global nutrition transition) (Caballero and Popkin, 2002; Popkin et al., 2012; Walls et al., 2018). The long-term shift away from primarily subsistence practices to combination subsistence and commodity agriculture created fissures in the localized, closed-loop system of many smallholder farmers. A traditional or culturally appropriate diet—a diet that is rooted in place or history and has particular cultural and personal meaning for eaters—reflects a set of propositions about the organization of food practices that cannot be assumed.

In the literature on agroecology, traditional diets are mentioned frequently and are highly valorized, but the desire for connections between the growing and the eating may rely on tropes that do not reflect reality. The scholarly fields of anthropology of food and food studies have focused on the *construction* of traditional or culturally appropriate diet; this approach presumes that human societies are primarily responsible for the shared practices of growing and eating foods. Thus, their approach does not rely solely on a premise of environmental determinism (namely, crops and animals are grown in a place because they are naturally occurring in that place). Rather, there are two robust strands of research, one that examines traditional or culturally appropriate diets as a historically continuous set of shared practices (Mintz, 2007; Goody, 1982; Mennell, 1996; Revel, 1982; Parkhurst Ferguson, 2006) and another that positions them as a more fluid set of adaptations to changing circumstances (Anderson, 2005; Carney and Rosomoff, 2011; Wilk 2006; Ray, 2004). In reality, what happens on the ground often involves a combination of both.

In Cuba, for example, one of the places where agroecology practices have gotten the most international attention, a culturally appropriate diet is heavily Spanish-influenced; indigenous people were mostly wiped out or aggressively assimilated during colonization (Garth, 2020). But Spanish crops are not perfectly adapted to Cuban ecosystems, like

rice, which requires too much water and cold weather, or potatoes that tend to rot in the humid heat. Yet, rice and potatoes remain central ingredients to many Cuban dishes and meals. Customs and habits (in laymen's terms, what people desire to eat), may not correlate with what makes most sense to grow, but instead involve broader cultural beliefs, political contexts, and economic realities.

"Culturally appropriate" foods are thus complicated in a mobile, global world, and in a post-colonial context. While academic literature can treat cultural appropriateness as a static concept, it is instead contested and shifting, and shaped in response to place, power, and politics (Sampson and Wills, 2013). In the United States, as another example, what may be culturally appropriate will depend not only on region but also on ethnicity and religion, and in many cases, middle- and upper-class white Americans eat from a range of traditional diets that are not their own.²

If agroecology is the integration of ecological science with other disciplines for the creation of a more *sustainable* food system (Méndez et al., 2017), it is possible to engage, or not, the food traditions that are fed, or not, by that sustainable system. However, if agroecology is also understood as a social as well as physical means of producing food, inextricably linked to the right of local people to define their food systems (Simón Reardon and Pérez, 2010), then the questions of *how* and *for what* agroecological crops are used become more important.

One of the foundational texts in this field, Stephen Gliessman's textbook *Agroecology: The Ecology of Sustainable Food Systems*, lays out the argument for paying attention to culture. The book contains an entire chapter on culture, community, and sustainability, and argues that cultural and economic systems must support the sustainability of agroecosystems; tensions between these spheres will undermine sustainability (Gliessman, 2015). The cultural transformations of diet and desire are part of a larger economic and social unraveling. The process is self-reinforcing, as "regional and cultural differences in diet and cuisine are slowly disappearing with the homogenization of the food supply" (p. 330). The result is a loss of place-based identity and of connection to who grows food. In other words, agricultural sustainability needs to be based in *place*, in a supportive cultural context where diet, desire, livelihoods, and agriculture are mutually reinforcing. As we will show, however, this field now needs to move beyond such general calls. It makes sense to further develop more explicit, systems-informed connections between the push of agricultural production and the pull of making and consuming meals, connections that acknowledge that food from elsewhere is now intrinsic to the everyday eating habits of much of the globe, and that "tradition" and "appropriateness" are complicated in light of such habits. Agroecology developed as a field when ecologists and agronomists found common interests, and has since grown to encompass social science and economics (Francis et al., 2003). It is not surprising that its focus to date has been more on production than consumption; the next step is to fully integrate place-based cultural investigations into agroecology's systemic view.

The FAO wants to move agroecology from scattered success to feeding the world sustainably (Morales and Ferguson, 2019a) and to do so will require considering the full cycle of agroecological actions, from seed to plant, from kitchen to compost, from farmer to eater. Given the ongoing degradation of the connection of people, place and food discussed above, work for this Element needs to involve *explicitly* reconnecting food production and food consumption through innovative conceptual frameworks. How can transdisciplinary investigations about the intersection of agroecological practices and traditional and culturally appropriate diets make such connections? A whole-systems understanding that includes culture and food traditions, “interlinked and interdependent” with other Elements (10 elements|Agroecology Knowledge Hub, n.d.), is needed in order to achieve the FAO Element in scholarship as well as in practice.

In this research review, we combine a literature review of scholarship and action reports in agroecology and integrate analysis from anthropology and food studies to reveal what is being pursued, and what is missing, at the intersection between agroecology, culture, and food. We include non-peer-reviewed sources to examine the relationship between scholarship and action and to reflect agroecology as not only science but also movement and practice. This approach takes account of the premises of the FAO Elements and also provides several paths forward for success.

First, we introduce a case study of traditional indigenous food that demonstrates the complexity of healthy and diverse traditional diets. We use the term “diet” both because this is what the FAO and related work use, and because in anthropology “diet” refers not only to what people eat but also to ecological, socioeconomic, and cultural influences on what they eat (Camacho, 2006). Next, we review relevant agroecology and FAO literature, and then expand the review to food sovereignty literature, breaking out scholarly assumptions about culturally appropriate and traditional foods. We then present examples of where agroecology and food traditions truly overlap in research and practice. Finally, we offer recommendations for how agroecology may integrate concepts, methods, and knowledge from complementary disciplines. Our goals are to reveal the current state of research on this Element and to create a robust interdisciplinary dialogue that encourages further, more nuanced explorations of the relationships between culturally appropriate and traditional crops and culturally appropriate and traditional dishes. Using a transdisciplinary framework, we argue for understanding food choices in the historical, geographical, cultural context in which they arise as the best way to fully and accurately incorporate culture and food traditions into the discipline and practice of agroecology.

Contradictions in health, diversity, and tradition: The case of frybread

Over the past three decades, there has been an important but parallel evolution among researchers, citizens, and activists in their perception that food *matters* to an

understanding of the human experience. There has been a rising awareness that conditions of production are crucial to understanding our contemporary food system; however, the production of the *components*, the ingredients of people’s meals, has been considered separately from the production of the dishes and the drinks. Often, important interconnections and insights are missed because the fate of the individual farmer is not associated with anyone who takes the milk or grain or pulse and then turns it into cheese or beer or tofu.

In a similar vein, indigenous peoples have pointed out that in their worldview and everyday practices, the ingredients are not differentiated from the dishes and drinks, those final products that not only nourish bodies but also reproduce cultural values that are crucial to the functioning of societies. As quoted in the FAO-commissioned report, *Cultural Indicators of Indigenous People’s Food and Agroecological Systems*, “the death of a traditional food system is the death of a nation, physically and culturally” (Woodley et al., 2007). For many who live close to the land, the relationship between producing and consuming food is a reciprocal one. In order for both communities and environments to thrive, the connections between knowledge and practices from soil to kitchen must be strengthened.

To successfully create research and action that connects these dots, more work remains to be done. In scholarly and policy discourse, there is a tendency to rely on the more dominant agroecological paradigm of sustainable production systems and then to argue for the “incorporation” of traditional diets in order to improve health and wellbeing. However, traditional diets themselves are complex and multifaceted. In a classic anthropological consideration of food and cuisine, Jack Goody (1982) pointed out vastly different growing and eating patterns in a comparison of groups residing in Africa, Asia, and Europe. Ultimately, he traced these *both* to environmental conditions *and* the organization of political systems. According to this anthropological analysis, complex social organization is reflected *and* reproduced in agriculture and food practices. Thus, more complex societies have more complex cuisines: the modes of growing, processing and transforming the ingredients reflect social conditions.

And then there is the definition of a “traditional diet” – by what criteria should this be determined? For many whose lives and identities are intertwined with indigenous and localized food practices, dietary changes occurred multiple generations ago, due to losses of land, sovereignty, and traditional crops through displacement by settlers and colonial governments. Many foods that have become “traditional” embody *this* legacy, and are increasingly seen as detrimental to health and wellbeing. A clear case of such an issue is the Native American dish “frybread.” This dish, which became a crucial part of the diet of people placed on reservations, emerged from the realities of free or inexpensive wheat flour and lard provided by the US government at the same time that many were unable to easily access grains more specific to local indigenous foodways, such as corn (Hoover, 2014). A century or more after the forced removal from native

lands and the subsequent reliance on the American government for sustenance, frybread is a substantial and meaningful part of Native American foodways (Vantrease, 2013). There has never been a practice of producing flour on the reservations, and the dish provides very little, nutritionally speaking, to the diet (Smith and Wiedman, 2001). In fact, the consumption of frybread is understood to contribute to poor diets, pervasive metabolic diseases, and “commod bod,” referring to a high incidence of overweight and obesity among Native Americans (Vantrease, 2013). Thus, within indigenous communities, the association between eating frybread and poor health outcomes is increasingly understood. But frybread also *means* a lot; eating it signifies something crucial about contemporary Native American identity. Who gets to make the call as to the future of frybread? What of the goals of improving livelihoods as well as health and wellbeing? How are criteria for conditions of improvement developed, implemented, and assessed?

A crucial conundrum here involves the relationship of the past with the present in order to shape the future. Building or changing systems involves making predictions based on ameliorating current problems. However, if the domains of analysis remain parallel rather than interdependent, solutions can be too simpleminded and neglect system-wide consequences. In the case of Native American frybread, a dish invented under oppressive circumstances now represents and reproduces ‘pan-Indian’ identity (Vantrease 2013, p. 59). At the same time, the long-standing system of providing free or low-cost food to Native Americans on reservations continues, and, it could be argued, such practices have become the de facto food system, thus compromising either the persistence or revitalization of agricultural and food processing practices rooted in pre-colonial traditions, from farm to plate. Thus, various systems are intertwined and do not necessarily work towards a singular goal.

In this case, commodity-based foods *are* traditional everyday foods. The push and pull between what might constitute the best methods for preserving and promoting traditional ecological knowledge, traditional diets, and health and wellbeing are now intrinsic to debates within indigenous communities. Native American author Dana Vantrease provides a telling example:

[In 2005] the South Dakota legislature debated making frybread the official bread of South Dakota. Before the vote, Mary Anne Bear Heels McCowan of the Rosebud Sioux Tribe told legislators, “This will show that South Dakota is proud of all the contributions of its citizens,” including Indians. Kibbe Conti, a dietitian and member of the Oglala Sioux Tribe, disagreed: “It’s a food that has contributed to our downfall. In our history we have replaced a lot of our food with fry bread and it is not a superior food compared to what we had before” (quoted by *Native American Times* 2005). The measure passed, but with less than unanimous support. (p. 66)

If “culture and food traditions” constitute one of the ten Elements that define agroecology—and indigenous and small, localized groups are understood to be the people that are already most invested in agroecological practices and are their most important practitioners—the case of Native Americans living on reservations and the significance of a dish like frybread might need to be at the center of debates over future food systems. How can low-input, diversified farming take account of the long-term integration of industrially-produced foods into the habits, traditions, and identities of indigenous and small, localized groups? Such an integration will not happen easily or quickly. In other words, how does agroecology create a vision that clears away centuries of oppressive and destructive practices and policies, while also respecting that over that same long arc of history people have created meaning and purpose from the foods available to them? Can frybread remain in a future food system build on the principles of agroecology and sustainable development? Should it?

Culture and food traditions in the agroecology literature and development

Working from an understanding that these kinds of complications and contradictions exist in local and indigenous daily foodways, where does the literature stand on agroecology and food traditions? We conducted a literature search of the intersection between these two fields, using keyword searches in scientific databases for “agroecology” or “food sovereignty” with a combination of related terms, including “culturally appropriate food,” “traditional food,” and “traditional diet.” We also reviewed existing reports in the FAO agroecology database and solicited relevant articles from colleagues. There was very little scholarly literature to be found, at least in English, that examined this intersection meaningfully; many pieces refer cursorily to traditional diets without examining them in depth. Below, we review the limited literature, as well as case studies and reports used in the FAO and other reports. We examine the material through a critical and cultural lens, bringing social science and humanities training to bear on the work of agroecology scholars and advocates. This lens exposes assumptions and connotations between health, diversity, cultural appropriateness, and tradition in food consumption. Relying on pieces that either engage with the complexity of diets, or expose the assumptions made about them, the following sections discuss recurring themes discovered in this review.

The absence of culture and food traditions in FAO material

The FAO’s report on its own work in agroecology includes no substantive discussion of traditional diets. This is a missed opportunity in demonstrating research priorities by the body that promotes culture and food traditions as a primary element of agroecology. The report has several mentions of traditional *crops*, such as heirloom rice varieties in India and traditional beans tied to local culture and religious festivals in Nepal; but in the latter, the

focus is on better marketing and a rise in crops' market price (Food and Agriculture Organization of the United Nations, 2018). In these cases, traditional or local diets would seem to be supported indirectly through income generation, rather than directly from the crops themselves. This point also arises in scholarly work and is discussed later.

One of the FAO's case studies, from Ecuador, references "varied healthy diets based on a traditional food culture" and a "focus on food security, internal and local markets... diversified healthy food, helping to address widespread malnutrition" (FAO 2018 p. 20–22). The organization does not specify which healthy diets and traditional food cultures they refer to. The FAO's list of publications in this work does not include any titles about diet. One of their separate "Profiles on Agroecology" explicitly emphasizes targeting non-local markets for coffee because local consumption of the crops did not provide enough of a market, concluding that one of the long-term benefits of a coffee cooperative is "improving access to healthier food and healthier practices," as well as anticipated increased land fertility (*Communal Life of Love and Unity of the Mountain People*, n.d., p. 3). In other words, agroecology in this case is not feeding local people directly through produce—a conundrum between subsistence and market economies that we explore further below.

Finally, the FAO's report on its 2014 International Symposium on Agroecology for Food Security and Nutrition reveals some attention to diverse diets. The symposium's session on "People and Economies" included topics on natural capital, building markets, employment, social capital, learning processes, and gender—with one topic titled "Diverse Farming System, Diverse Diets." Key points raised in this session included the need for data on the importance for crop diversity for health benefits, and the need for evidence and awareness of chronic health problems caused by loss of traditional diets (FAO, 2015). The FAO's own database therefore covers diets and health, yet has almost no material on culture and food traditions.

Some scholars have argued that the FAO has taken on only the technical aspects of agroecology, not the socially transformational parts of the movement; agroecology is a "territory in dispute" (Giraldo and Rosset, 2018). While this is a valid critique of agroecology in development work, even academic literature on agroecology does not take seriously its own calls to integrate culture and tradition into this socially-transformative discipline. We find many assumptions about traditional diets in our review of English-language literature and non-governmental organization work, which are broken out in sub-sections below:

Timelines for "traditional" diets may be unclear

As noted in the case of frybread, integrating cultural concerns becomes complicated when we examine the timeline for determining what is "traditional" food. In part of the Caribbean coast of Colombia, Afrocolombian and *chilapo* subsistence farmers originally planted species "familiar to them from their original homes" (Álvarez-Salas and Gálvez-Abadía, 2014, p. 817), presumably before

migrating from Africa and the Colombian region of Córdoba. The area was also settled by people from the Andes. Land use changes, outside remittances, and drug trafficking have in recent decades changed how and what people farm. This paper in *Agroecology and Sustainable Food Systems* argues for food sovereignty to restore dietary customs. Given the complex ethnic, historical context of the region, those customs are chosen *at a particular moment* in the development of food customs over time, and perhaps arbitrarily so. Richard Wilk makes this point about shifting expectations of food in a globalized and "hybridized" world: for a period in recent history, "authentic" Belizean food meant *imported* food, not local or historically traditional food (Wilk, 2006). Empirical work on the overlap of agroecology and food traditions should be explicit about *when* in history arose the desirable traditional food in order to determine whether agroecology is truly achieving this goal.

Focus is on tradition in production and processing, not preparation

Where tradition does emerge in the agroecology literature, it nearly always refers to traditional food *production* practices, rather than traditional food *preparation*. For example, in an article entitled "Coupling Agroecology and PAR to Identify Appropriate Food Security and Sovereignty Strategies in Indigenous Communities," most of the references to "diet" were focused on food and vegetable intake, or on the influx of culturally inappropriate imported foods—not on preparation methods for those diets (Putnam et al., 2014). In an article on Maori women reclaiming food sovereignty and promoting agroecology, the references to "tradition" were either about traditional research relationships or traditional ways of farming, with one reference to traditional medicines (Stein et al., 2017). In a blog post by Elizabeth Mpofu, the General Coordinator for Vía Campesina, the largest global peasant network, Mpofu writes that agroecology "is based on traditional and indigenous *farming* knowledge" (Mpofu, 2018, emphasis added). It is worth highlighting that there is nothing inherently wrong about focusing research and activism on farming practices, but it does demonstrate the absence of cooking, food choice, and traditional diets—and it does limit the field's ability to conceptualize food traditions holistically.

Preparation of food includes many steps after production, including processing into edible form, cooking with heat, preparing without heat, preserving, and storing. Agroecology, in its current formulation, might not be able to address these fundamental aspects. As mentioned earlier, the problems are both conceptual (the historical focus on production) and practical (the difficulty in defining the preferable diet and how to create the best conditions for it).

One example of an organization that embraces a framework of analysis and action, focusing simultaneously on processing and preparation methods as well as production, is Slow Food. Founded in 1986 by Carlo Petrini and other Italian activists, Slow Food's initial impetus was to

resist the increasing presence of industrial and fast food companies in Italy. It now aims to better integrate many of the FAO's sustainable development goals into its own mission. Much of the organization's early efforts included events, actions, and writings to promote small-scale and artisanal production of foods and dishes understood to represent this way of life. Terra Madre, a meeting of food communities, has been a major annual effort of the organization, as well as the Salone del Gusto, an international fair promoting local sustainable foods. More recently, Slow Food has embraced many of the principles of agroecology, saying these principles can also work towards creating a "nutrient rich diet" that is respectful of cultures and preserves biodiversity. The organization identifies certain areas of overlap between their mission and the overall strategies of the field of agroecology, focusing on the Presidia, an effort to document almost 3,000 food or drink products at risk of extinction. Production protocols here incorporate agroecological principles. The integration of a fairly sophisticated understanding of what makes a food or drink "traditional," with a set of principles as to the best ways to preserve and promote these practices from farm to table, might serve as a model for such work on a broader scale (Peano and Sottile, 2015; Siniscalchi, 2014).

Diversification is focused on income over subsistence

Part of the gap—in which traditional diets get many mentions but little detail in publications—may come from a seeming tension in agroecology literature as to whether agroecology is about moving away from capitalist food regimes and back toward subsistence agriculture, or about farmer profitability and access to markets. One can perhaps assume that *subsistence* agroecology will lead to culturally appropriate diets, because people grow what they themselves will eat. That assumption breaks down, however, when people begin growing for others, for markets. Misra, in a study in Bangladesh, writes that "rural malnutrition must be analyzed as symptomatic of a deepening agrarian crisis in which the *obsession with productivity* increases and commercialization overrides people's democratic right to culturally appropriate, good, nutritious food" (p. 473, emphasis added). The paper "cautiously advances agroecology and food sovereignty as possible alternatives" (Misra, 2018, p. 473). Crop diversification on its own, when meant primarily for markets, does not generally guarantee improvements to smallholder diets.

Subsistence agriculture and market-based production are not necessarily at odds. Putnam and colleagues argue that agrobiodiversity contributes to nutritional diversification through both subsistence *and* market distribution; although they also note a case of Mexican government policies pushing Mayan communities towards market production, pressures that move Mayans away from traditional land use and growing practices (Putnam et al., 2014). If agroecology improves growers' access to markets and income, it may only mean that traditional growing practices are used to grow foods for purchasers. If products are exported, they are not directly supporting culturally appropriate foods for the community.

Culture and food traditions in the food sovereignty literature

Because there was relatively little of depth to review in the agroecology literature on traditional diets, we extended the review to include papers on food sovereignty, which is often closely linked to agroecological movements and research. It appears that the agroecological idea that people have a right to "healthy, nutritious, and culturally appropriate foods" originally comes from the food sovereignty movement (Hernández Cervantes, 2017, p. 126). A food sovereignty framing could potentially ease some of the tension of top-down approaches to promoting traditional diets; in accordance with food sovereignty, people decide not only what seeds to plant and what kind of farming to pursue, but "what they will ultimately eat for dinner" (Pimbert, 2009, p. 8). And yet, scholarship in this area reveals similar gaps and assumptions about traditional diets as are found in agroecology literature: that if agroecology or food sovereignty are implemented, a healthy, locally-desired, indigenously-related food tradition will naturally (re-)emerge. Other scholars similarly found that food sovereignty literature includes many references to the importance of culture, but that no pieces treated culture as dynamic and changing or dove into cultural studies of food (Sampson and Wills, 2013). Themes from food sovereignty literature, relevant to agroecology, continue here:

Culturally appropriate food may not always be cultivated food

In some places, indigenous foods are wild foods, not cultivated ones, as evidenced in literature on indigenous Canadian diets. In a paper on food security in the Ojibway Nation in Canada, Lowitt and others directly connect traditional diet—in this case, a fish-based diet—to food sovereignty, and the community's ability to govern their ability to eat culturally appropriate and nutritious foods (Lowitt et al., 2018). Similarly, Neufeld and Richmond, in an article about food security for indigenous Canadians in southwest Ontario, link food sovereignty, health, diet diversity, and biodiversity. Agroecology may not be needed here; traditional foods include deer meat, fish, wild rice, and berries, the only cultivated item mentioned is corn (Neufeld and Richmond, 2017). Another study, of a Cree Nation effort to preserve local food systems and culture, again describes wild-sourced traditional foods such as berries, moose, seagulls, fish, eggs, and ducks (Kamal et al., 2015). These are instances in which agroecology does *not* support healthy, diversified, and culturally appropriate diets, and in which food sovereignty might promote such diets without much cultivation.

Culturally appropriate food may not always be "healthy"

As we have discussed, ideas about "health" may not always line up with what is culturally appropriate or traditional. Another study on indigenous Canadians found that traditional foods, especially fish and meat, exceed Canadian governmental guidelines for mercury levels. Indigenous people have to make decisions that weigh cultural and

nutritional benefits against the risks associated with mercury contamination (Chan and Receveur, 2000). Health in this case is a negotiated concept, and highly dependent on local environmental conditions.

Dietary changes, away from tradition, are not always for the worse, at least in regards to nutrition; it depends on the diets, and on the timeframe involved. In some cases—for instance, with animal meat consumption—people may relinquish traditional foods to protect personal or environmental health (Hoffman and Baumung, 2013). These moves could lead to a number of outcomes, including modifying traditional dishes to include non-meat or lab-grown meat ingredients and creating new traditional dishes. In cases such as these, a more traditional approach to food may be at odds with nutritional or other health goals, and people need to contend with which goal they collectively (or locally) wish to prioritize.

Traditional food may not be locally desirable

Food sovereignty, agroecology, and traditional food—treated in the literature as natural complements—may actually come into conflict if farmers are choosing their own crops. Ethnographic work based in Morocco finds that agrobiodiversity may be new, rather than long-established, a result of recent transformations in agriculture that either adapt or reject traditional practices. The last 50 years in the Mgoun valley in southern Morocco have seen changes in the economy and labor regimes, resulting in a new form of peasant farming. Here, farmers may have an “ambivalent relationship” to tradition, and the author argues that “the goal should not be to protect an unexamined ‘tradition’, which can obscure a conflictual history of hierarchy or exclusion, so much as to promote a form of autonomy in which agrodiversity interacts with other priorities, such as livelihood security, land tenure security, social equity or environmental adaptation” (Rignall, 2016, p. 727). How much traditional foods actually contribute to diet can be highly contextual even within the same region and culture, depending on urban or rural location and culture (Saxena et al., 2016). Diet and cuisine can be influenced not only by ecology but also by sensory preferences that cement in *place*, over time (Camacho, 2006). Place-based particularities complicates assertions that agroecology automatically supports food traditions, and vice versa.

Traditional food projects may not succeed in all economic contexts

Food sovereignty efforts may not be able to create access to culturally appropriate diets if they are working within an unsupportive economic context. Alkon and Mares describe the efforts of the now-defunct West Oakland Farmer’s Market in Oakland, California, whose goal was to produce and sell culturally appropriate crops for the Black community there, specifically crops used in traditional soul food recipes. The market eventually closed because the community it targeted could not afford its produce. The authors conclude that food sovereignty efforts in the United States are constrained by its neoliberal, corporate food system; adopting entrepreneurial and market-based strategies end up excluding the marginalized communi-

ties that sustainable and culturally appropriate food production efforts were trying to support (Alkon and Mares, 2012). Such an argument strikes us as an equally relevant concern for agroecology and echoes the point, above, that agroecology’s aims may be complicated by the need or focus on increasing income.

Food traditions and food sovereignty must be examined in context

All these points of tension in studying food traditions alongside agroecology reveal a need for geographical, cultural, and historical specificity in any work aimed at promoting traditional foods. Steckley’s (2016) article on the “problem of dietary aspirations for food sovereignty” is excellent example of paying attention to such specificity. The author argues that food sovereignty literature often overlooks specificity in food cultures and tends to assume that people will prefer local or culturally appropriate food when they have control over production. We see the same assumptions in agroecology literature reviewed for this article.

In the context of Haiti, Steckley shows how history, politics, and oppression combine to create class hierarchies that exert deep influence over people’s dietary aspirations. Supposedly culturally appropriate foods, like millet and root crops, are deemed “peasant” foods, denigrated by economic elites and peasants like, and passed over for “elite” and “foreign” foods such as white bread and spaghetti (Steckley, 2016). The paper cites critics of food sovereignty literature, pointing out “insufficient attention to such things as the dynamics of patriarchy and racism, conflicting aspirations of differentiated producing classes, and the role of markets and trade” (p. 550). In this treatment, any transformation of the agro-food system in Haiti requires a problematization of its current food culture (p. 552). A context-less assumption that food sovereignty will automatically lead to healthy and traditional diets would also certainly fail.

Importantly, this research was undertaken through ethnographic field research, a method that prioritizes participants’ meanings (Emerson et al., 2011) and is therefore well-suited to explore the particularities in people’s daily food choices. The study’s results suggest “a need to appreciate how the cultural geographies of food interact with—and can in fact exacerbate—political and economic inequalities” (Steckley, 2016, p. 549). Another study, undertaken through environmental anthropology combined with ethnobotany in Bolivia, concludes that despite the links between production, marketing, consumption, and health, the economic and social components of smallholder peasant agriculture are not currently integrated. Efforts to promote native, traditional, and Andeanized crops “would benefit from explicit acknowledgement that their work is not just economic, but also cultural, and aesthetic. Addressing larger issues of cultural stigma and palatability has the potential to strengthen agrobiodiversity conservation” (Keleman Saxena, 2017, p. iii). Agroecology could be part of creating these links between physical cultivation and the context in which it takes place.

Examples of integrating agroecology, culture, and food traditions in scholarship and practice

Despite these many disconnects in the literature, there is empirical research connecting cultural food traditions and agroecology. Illustrative examples come from a strong body of work located in southern Mexico. Here, the heritage of Mayan and Mesoamerican cultures continues to play out agriculturally in the form of *milpa*, an ancient agroforestry practice in which maize (corn) is cultivated with beans, squash, and other crops (Hernández Cervantes, 2017). *Milpa* crosses current national borders; it is also foundational to food security in Guatemalan rural communities (Altieri and Toledo, 2011).

A few studies examine what people actually *eat* as a result of agroecological *milpa* production. Hernández Cervantes and others (2017) find in a study on three communities in the Mexican state of Campeche that traditional agricultural systems produced over half of communities' foods. They list these foods, an exception to most literature we found. They also find that diversity of production does not always mean diversity of consumption; despite having highly diverse home gardens, family food consumption revolved around a few main plant species. Nations and Nigh (1980), in an anthropological study, trace ancient Mayan trade routes and food production that resulted in sustainable, traditional agricultural systems contained in tropical forest. They too list cultivated and protected plants, building connections between place-based cultivation and consumption. Zizumba-Villareal and others (2012) catalog not only the plants harvested but also which parts of the plants are eaten, how they are preserved, and their culinary transformation into edible products. Further, they suggest that *consumption* of wild species drove domestication practices in Mesoamerican communities. In other words, here, traditional foods themselves shaped what some now think of as agroecological practices.

This context-rich work extends to the changing and dynamic interplay between tradition, globalization, and cultivation. Jenatton and Morales (2019) document how young people in Chiapas, Mexico prefer soda to the traditional maize drink *pozole* because they associate soda with wealth and *pozole* with peasant life. Yet despite the effects of global socioeconomics on desire, *pozole* persists as a primary driver of peasant agroecology in the area because it is a vital food source with both nutritional and cultural value.

Beyond the *milpa*, Labvida—an action research and school gardening collective in the state of Chiapas—provides one of the most compelling links we found between agroecology and culturally appropriate foods. They have adapted the Harvard Healthy Plate, a nutritional tool designed to be minimally influenced by industry lobbyists, to be relevant in local ecosystems, including traditional fruits and vegetables, tubers, and insects. Labvida's suggested plates are slightly different between lowland and highland areas, adhering to landscape specificity, and are published in two indigenous languages in addition to Spanish (Teaching materials – Labvida, n.d.). Publishing and discussing such materials is critical for promoting traditional foods in a country that has undergone rapid and

dramatic dietary changes (Morales and Ferguson, 2019b), in a state where indigenous and peasant foods suffer from “cultural subordination” (Ferguson et al., 2019). This project is a genuine example of how agroecological practices can promote healthy, diverse, and culturally appropriate foods, and vice versa.

We imagine that there are other such efforts being undertaken that are not present in the peer-reviewed literature in English. Helda Morales, one of the members of Labvida and a pioneer of studying agroecological practices *in place*, says that women are some of the main movers in agroecology, but are largely invisible from publications and keynote speeches in the field (Morales and Ferguson, 2019b). Food preparation is historically women's work, and as such is understudied even in the cultural anthropology literature, where it should be a natural subject. Studies suggest that women are often the drivers of agroecological transitions within family units, the “guardians of biodiversity” and deciders about which crops to plant (Mier y Terán Gimenez Cacho et al., 2018). Food preparation and women's household decision-making are thus rich places for researchers to begin empirically connecting agroecology with place-based dietary traditions.

Conclusion

The FAO and the field of agroecology generally are trying to pull together many parts of the food system—with uneven success when it comes to linking healthy, diverse, culturally appropriate or traditional diets with agroecological systems. The potential synergies between food traditions and agroecology are powerful, as seen in examples from Chiapas and other states in southern Mexico. But those synergies will be different, depending on context and place.

Traditional crops cannot necessarily be linked to traditional dishes; traditional processing methods are not necessarily the same thing as traditional meal *preparation*; the



Figure 1: Tejate. Tejate is a gruel that is an important part of the traditional foodways of the Zapotec people who reside in the state of Oaxaca in Mexico. Some ingredients (masa, Rosita de cacao) are cultivated by the Zapotec. Others (cacao, seed of the mamey fruit) come from other regions. Copyright Amy B. Trubek 2020. DOI: <https://doi.org/10.1525/elementa.437.f1>

definition of “traditional” foods is place-specific and shifting; and diverse crop production does not always translate into diverse local diets. Culturally appropriate foods may be wild-sourced instead of cultivated, and they may not fit everyone’s definition of “healthy.” Food sovereignty can result in communities choosing non-traditional foods. These tensions between different food-related goals show that we cannot assume sustainable agricultural practices will automatically lead to other food outcomes in local communities.

Traditional farmers, rooted in place, tend to have deep, narrow knowledge, whereas scientists tend to have broad,



Figure 2: Rosita de Cacao. Left: Rosita de Cacao flower is a crucial ingredient in tejate, a gruel made of masa, cacao the Rosita de cacao flower and other ingredients. Right: Rosita de Cacao is a tree only found in certain area of Oaxaca, Mexico. It has been cultivated by the Zapotec indigenous community, especially in the village of Huayapam. Copyright Amy B. Trubek 2020. DOI: <https://doi.org/10.1525/elementa.437.f2>



Figure 3: Tejate Preparation. The methods and techniques for making tejate are passed down from generation to generation, and a fiercely held practice and a dish crucial to the identity of the villagers. The cacao, Rosita de cacao and mamey seed must be roasted on the comal before they are ground. If not, the result is not ‘authentic’ tejate. Copyright Amy B. Trubek 2020. DOI: <https://doi.org/10.1525/elementa.437.f3>

shallow ecological knowledge; an intersection of the two is needed for meaningful and comprehensive agroecological research (Vandermeer and Perfecto, 2012). This shallow knowledge is obvious in the agroecological literature on culture and food traditions. Links are assumed but not often explored. Food culture is complex, shifting, and highly specific to people and place—and future research must be, too, in order to be relevant to people’s lived experiences in the field, kitchen, and at the table.

Francis and others (2003) argue that “it is essential to build bridges and connections among and beyond our disciplines in production agriculture, as well as beyond the farm gate into the rural landscape and community. Fields of sociology, anthropology, environmental sciences, ethics, and economics are crucial” to understanding agroecology as the ecology of food systems (p. 100). Similarly, Alonso-Fredejas and others (2015) note, food sovereignty “cannot be exported in a blanket manner but needs to adapt to the political, social, and cultural rhythms of local peoples. Exploring these rhythms at the ground level would help foster such local and regional adaptations, and resituate scholarly attention toward the praxis of rural communities” (p. 444). As cultural and critical scholars, we recommend that agroecologists engage with political, social, and cultural place-based rhythms by:

- Enriching their inquiry with existing work from anthropology, geography, food studies, and other relevant disciplines, generating a basic literacy in how these areas of scholarship approach questions of food and place
- Explicitly naming, describing, and dating traditional cuisines in any literature referring to traditional diets
- Being clear about tensions and contradictions between different food system aims, such as cultural appropriateness, health, and sustainability
- Partnering with social scientists to create interdisciplinary agroecology research projects
- Training young agroecology scholars in a variety of (social) disciplines and methods for future transdisciplinary research

What people want to eat is what ultimately shapes agriculture. The FAO’s recognition that “culture and food traditions play a central role in society and in shaping human behavior” is undeniably true (Culture and food traditions|Agroecology Knowledge Hub, 2019). Now culture and food traditions must play a central role in scholarly and development work for it to really be one of the primary elements of agroecology, in research and in practice.

Notes

- ¹ The 10 Elements of Agroecology are diversity, co-creation and sharing of knowledge, synergies, efficiency, recycling, resilience, human and social values, responsible governance, circular and solidarity economy, and—the subject of this article—culture and food traditions.
- ² Famed food writer Michael Pollan recommends eating a “traditional diet,” no matter whose.

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The authors have no competing interests to declare.

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